Changes for the Better

MITSUBISHI ELECTRIC

FLOOR AND CEILING TYPE AIR CONDITIONERS

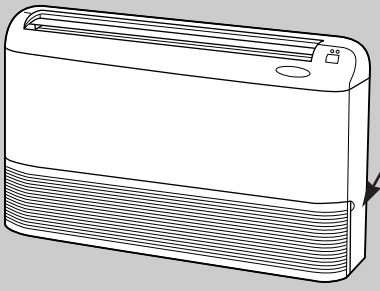
No. OB336

SERVICE MANUAL

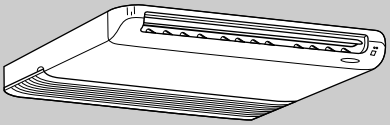
Wireless type
Models

MCFH-A12WV-E1(WH)
MCFH-A18WV-E1(WH)
MCFH-A24WV-E1(WH)

(When installed on the floor)



(When installed on the ceiling)



CONTENTS

1. TECHNICAL CHANGES ·····2
2. PART NAMES AND FUNCTIONS·····2
3. SPECIFICATION·····4
4. NOISE CRITERIA CURVES·····5
5. OUTLINES AND DIMENSIONS ·····6
6. WIRING DIAGRAM ·····7
7. REFRIGERANT SYSTEM DIAGRAM·····8
8. SERVICE FUNCTIONS ·····9
9. TROUBLESHOOTING·····11
10. DISASSEMBLY INSTRUCTIONS·····19
11. PARTS LIST·····21
12. OPTIONAL PARTS·····23

NOTE:
- This manual describes technical data of indoor units
- As for outdoor units MUCFH-A18/A24WV-E1, refer to the service manual OB337.
- As for outdoor unit MUH-A12YV-E1, refer to the service manual OB331.
- As for outdoor units MXZ-A18/A26/A32WV-E1, refer to the service manual OB319.

CE

1 TECHNICAL CHANGES

MCFH-13NV-E4 ➔ MCFH-A12WV-E1

1. Rated voltage has changed. (220-240V ➔ 230V)
2. Indoor electronic control P.C. board has changed.
3. Horizontal vane has changed.
4. Terminal block has changed.
5. Indoor heat exchanger has changed.
6. Remote controller has changed.
   Econo cool operation has been added.
7. Indoor fan motor has changed. (RB4V25-AB ➔ RB4V25-AC)

MCFH-24NV-E3 ➔ MCFH-A24WV-E1

1. Rated voltage has changed. (220-240V ➔ 230V)
2. Indoor electronic control P.C. board has changed.
3. Horizontal vane has changed.
4. Terminal block has changed.
5. Indoor heat exchanger has changed.
6. Remote controller has changed.
   Econo cool operation has been added.
7. Liquid of union has changed. (ϕ9.52 ➔ ϕ6.35)
8. Indoor fan motor has changed. (RB4V36-AB ➔ RB4V36-DB)

MCFH-18NV-E3 ➔ MCFH-A18WV-E1

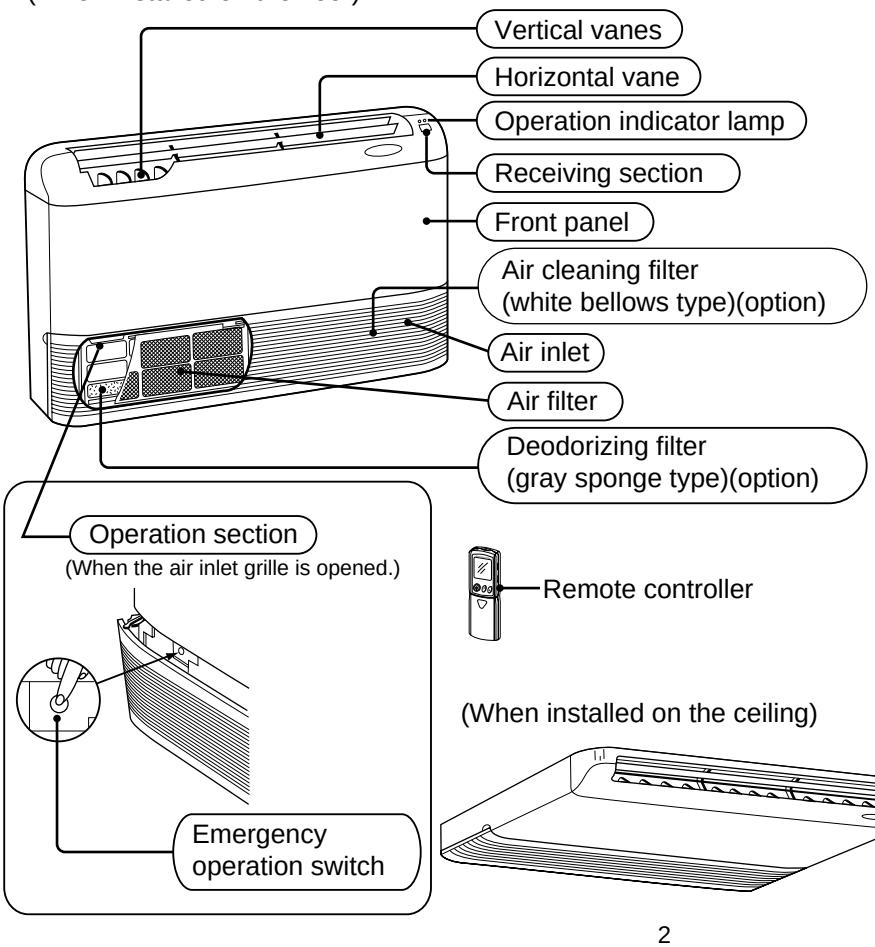
1. Rated voltage has changed. (220-240V ➔ 230V)
2. Indoor electronic control P.C. board has changed.
3. Horizontal vane has changed.
4. Terminal block has changed.
5. Indoor heat exchanger has changed.
6. Remote controller has changed.
   Econo cool operation has been added.
7. Gas of union has changed. (ϕ15.88 ➔ ϕ12.7)
8. Indoor fan motor has changed. (RB4V36-AB ➔ RB4V36-AC)

2 PART NAMES AND FUNCTIONS

MCFH-A12WV -E1
MCFH-A18WV -E1
MCFH-A24WV -E1

INDOOR UNIT

(When installed on the floor)

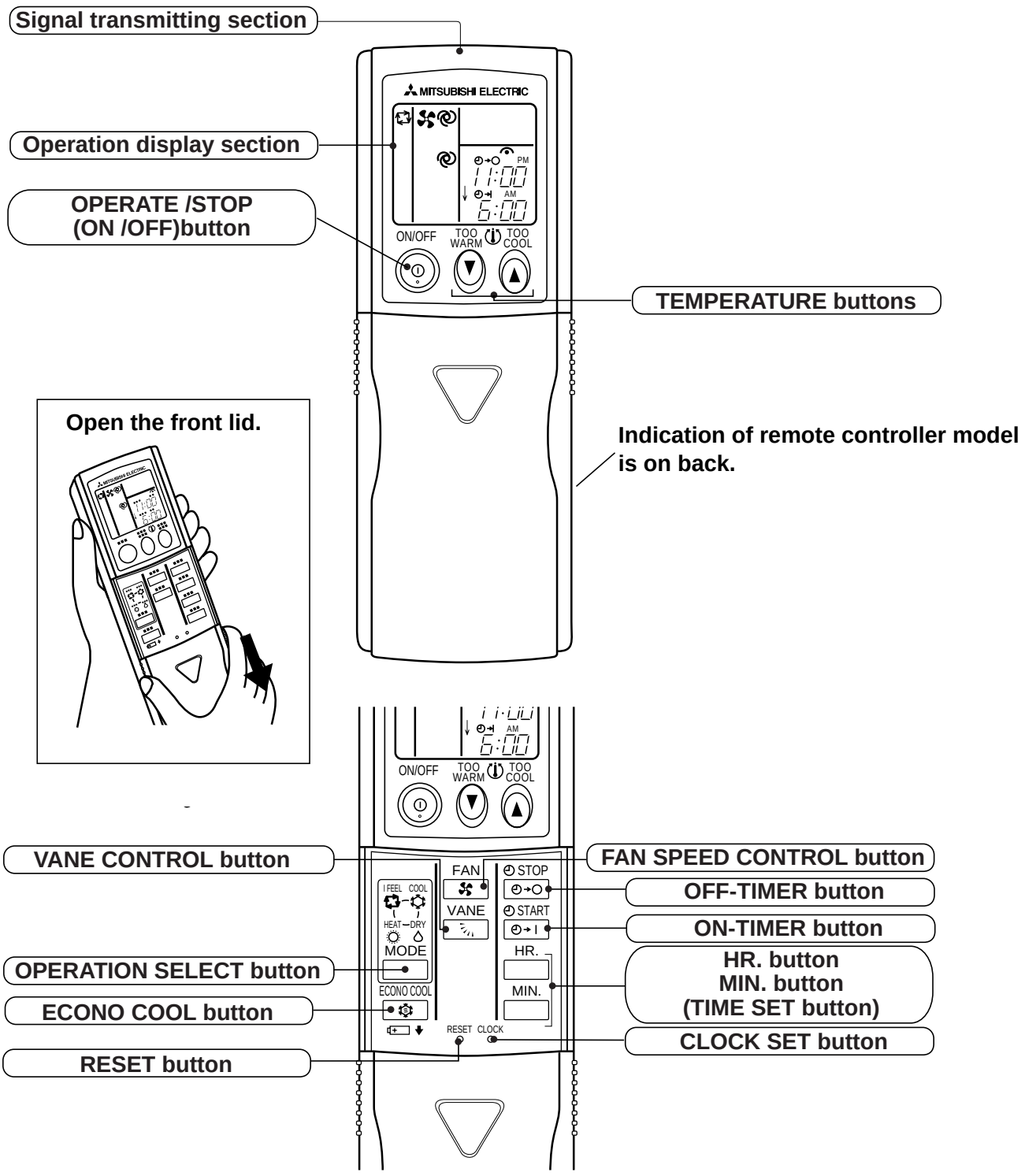


ACCESSORIES

	Item	Q'ty
①	Installation plate	2
②	Unit fixing screw 5 × 12mm	2
③	Wireless remote controller	1
④	Remote controller mounting hardware	1
⑤	Fixing screw for ④ 3.5 × 16mm (Black)	2
⑥	Battery (AAA) for remote controller	2
⑦	Drain hose	1
⑧	Drain pipe cover	1
⑨	Knockout cover	1
⑩	Screw for ⑨ 4 × 10mm	2

MCFH-A12WV - E1
MCFH-A18WV - E1
MCFH-A24WV - E1

REMOTE CONTROLLER



3 SPECIFICATION

Indoor model			MCFH-A12WV- E1		MCFH-A18WV- E1		MCFH-A24WV- E1	
Function			Cooling	Heating	Cooling	Heating	Cooling	Heating
Power supply			Single phase 230V, 50Hz					
Capacity	Air flow(High/Med.※/Low※)	m³ /h	780/636※/492※		840/696※/570※		840/744※/642※	
Electrical data	Power outlet	A	10		10		10	
	Running current	A	0.30		0.36		0.36	
	Power input	W	0.066		0.080		0.080	
	Auxiliary heater	A(kW)	—	—	—	—	—	—
	Power factor	%	96		97		97	
	Fan motor current	A	0.30		0.36		0.36	
Fan motor	Model		RB4V25-AC		RB4V36-AC		RB4V36-DB	
	Winding resistance(at20℃)	Ω	WHT-BLK 182.2 BLK-YLW 68.9 YLW-BLU 47.5 BLU-BRN 31.5 BRN-RED 22.9		WHT-BLK 82.9 BLK-YLW 65.6 YLW-BLU 36.0 BLU-BRN 27.0 BRN-RED 13.7		WHT-BLK 84.0 BLK-YLW 46.2 YLW-BLU 37.2 BLU-BRN 45.2 BRN-RED 13.6	
Dimensions W×H×D		mm	1100 X 650 X 180					
Weight		kg	25		25		25	
Special remarks	Air direction		5		5		5	
	Sound level(High/Med.※/Low※)	dB	46/41※/36※		48/44※/39※		48/45※/42※	
	Fan speed(High/Med.※/Low※)	rpm	1,240/1,060/845		1,320/1,145/960		1,320/1,190/1,060	
	Fan speed regulator		3		3		3	
	Thermistor RT11(at25℃)	kΩ	10		10		10	
	Thermistor RT12(at25℃)	kΩ	10		10		10	
	Remote controller model		KG04C		KG04C		KG04C	

NOTE: Test conditions are based on ISO 5151

Cooling : Indoor DB27°C WB19°C Heating : Indoor DB20°C WB 15°C

Outdoor DB35°C WB(24°C) Outdoor DB 7°C WB 6°C

Indoor-Outdoor piping length : 5 m

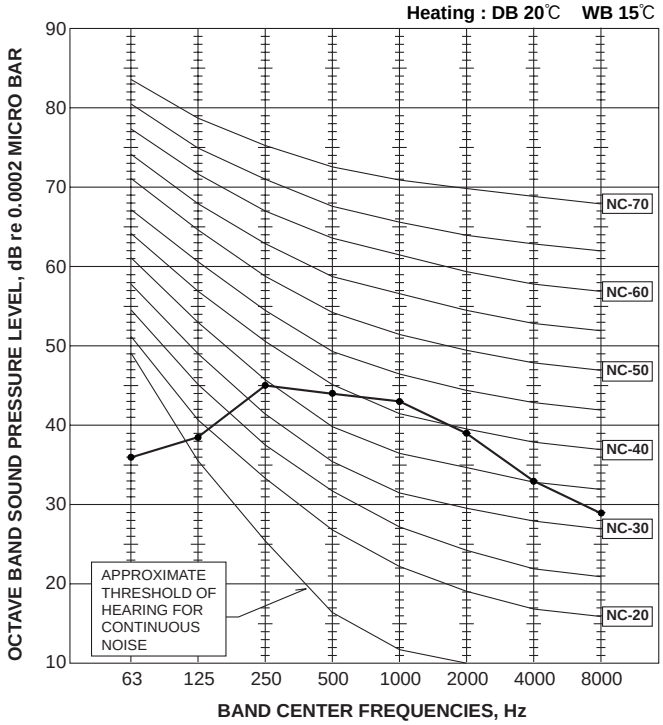
※ Reference value

4 NOISE CRITERIA CURVES

MCFH-A12WV - E1

SPEED	SPL(dB(A))	LINE
High	46	●——

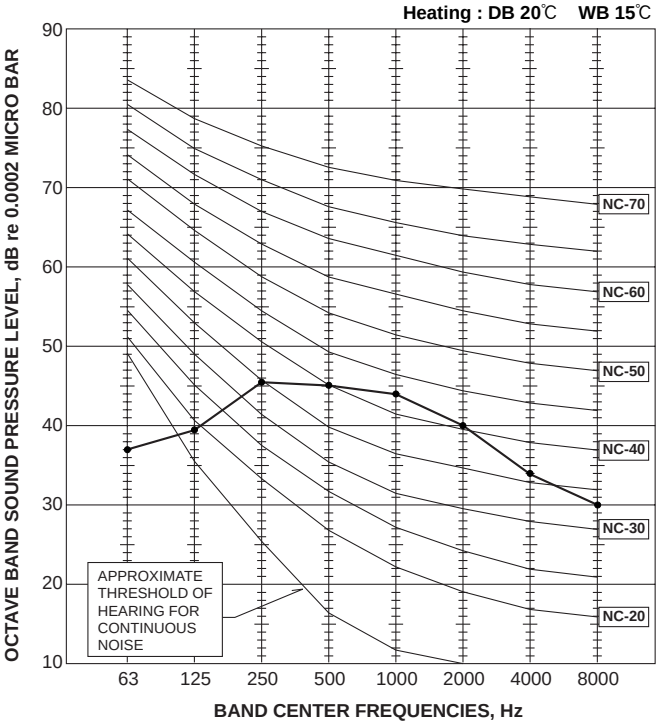
Test conditions,
Cooling : DB 27℃ WB 19℃
Heating : DB 20℃ WB 15℃



MCFH-A18WV - E1

SPEED	SPL(dB(A))	LINE
High	48	●——

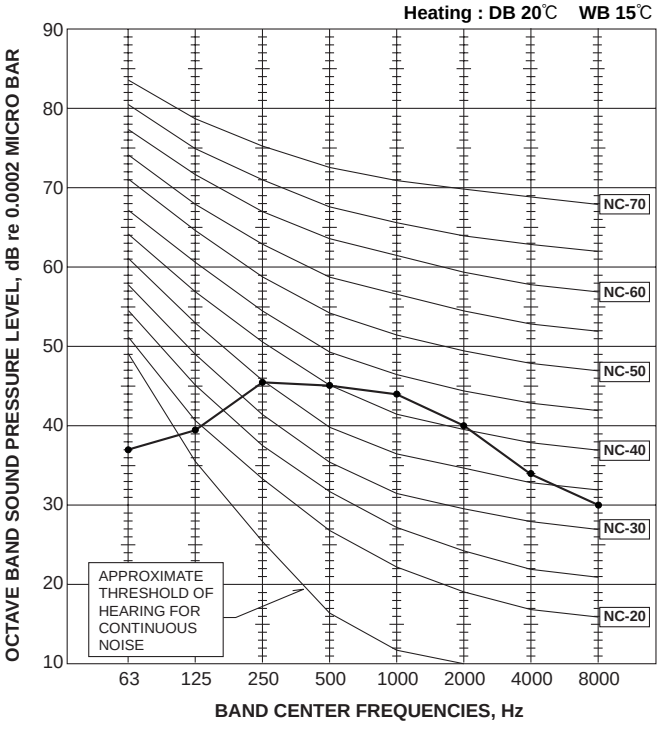
Test conditions,
Cooling : DB 27℃ WB 19℃
Heating : DB 20℃ WB 15℃

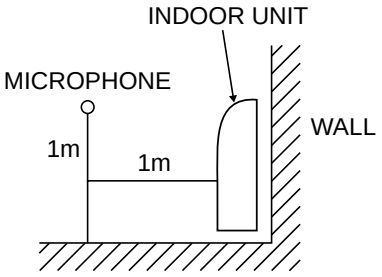


MCFH-A24WV - E1

SPEED	SPL(dB(A))	LINE
High	48	●——

Test conditions,
Cooling : DB 27℃ WB 19℃
Heating : DB 20℃ WB 15℃



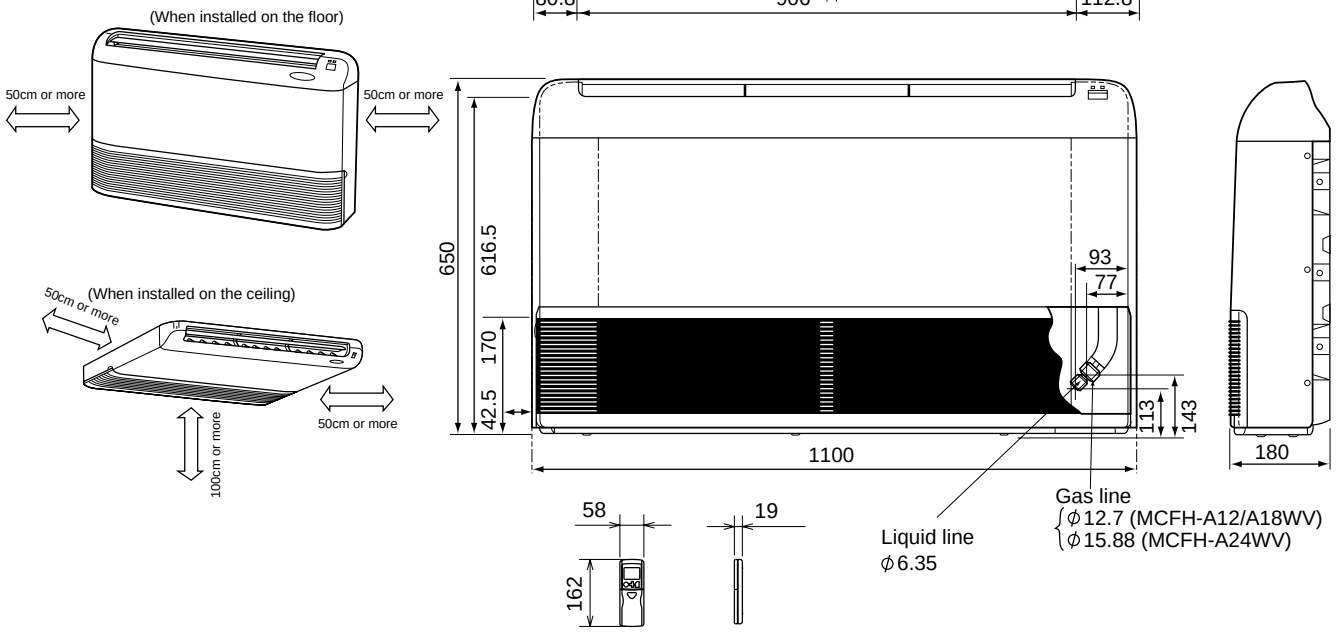


5 OUTLINES AND DIMENSIONS

MCFH-A12WV - E1
MCFH-A18WV - E1
MCFH-A24WV - E1

Unit: mm

INDOOR UNIT

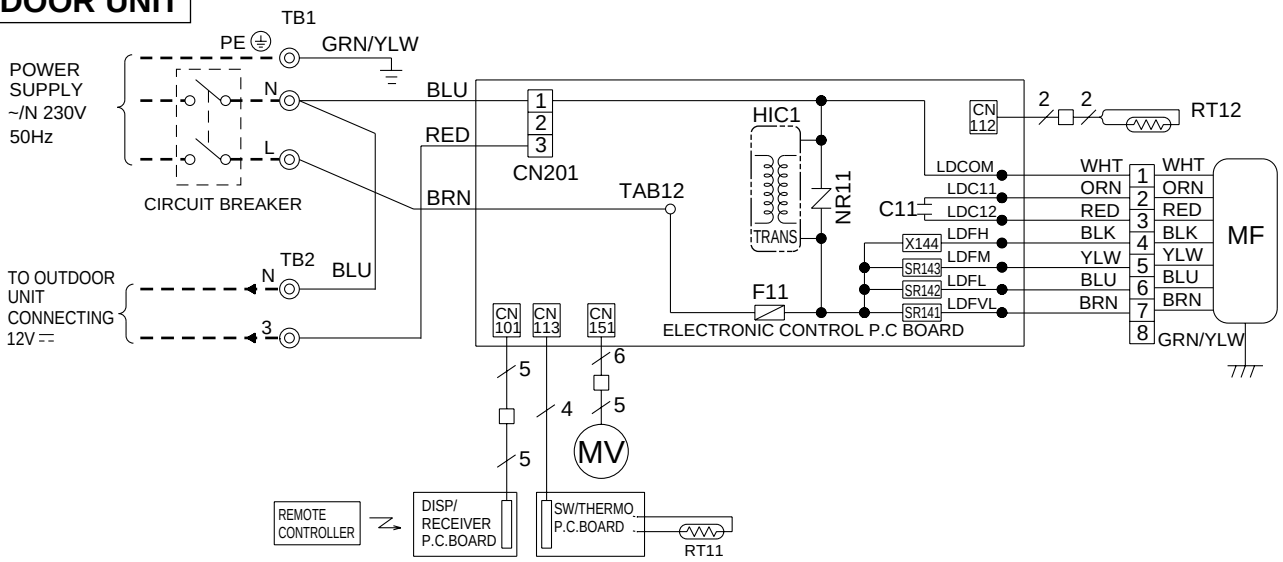


Wireless remote controller

6 WIRING DIAGRAM

MCFH-A12WV - E1 MODELS WIRING DIAGRAM
MCFH-A18WV - E1
MCFH-A24WV - E1

INDOOR UNIT



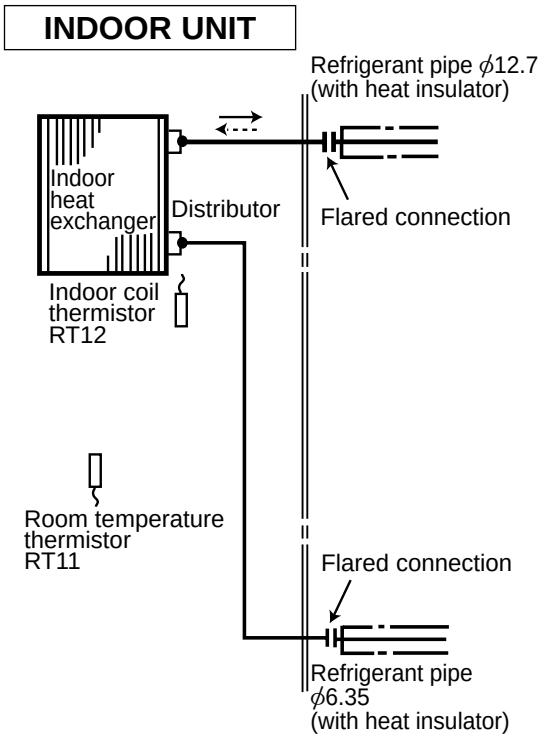
SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
C11	INDOOR FAN CAPACITOR	MV	VANE MOTOR	SR141~SR143	SOLID STATE RELAY
F11	FUSE (3.15A)	NR11	VARISTOR	TB1, TB2	TERMINAL BLOCK
HIC1	DC/DC CONVERTER	RT11	ROOM TEMPERATURE THERMISTOR	X144	RELAY
MF	INDOOR FAN MOTOR(INNER FUSE)	RT12	INDOOR COIL THERMISTOR		

NOTES: 1.About the outdoor side electric wiring refer to the outdoor unit electric wiring diagram for servicing.
2.Use copper conductors only. (For field wiring)
3.Symbols below indicate.
◎ : Terminal block ⊏⊐⊏⊐ : Connector

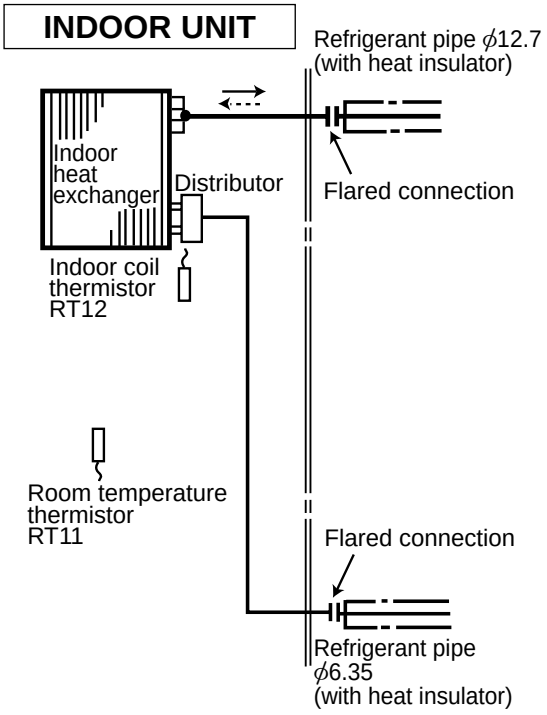
7 REFRIGERANT SYSTEM DIAGRAM

Unit : mm

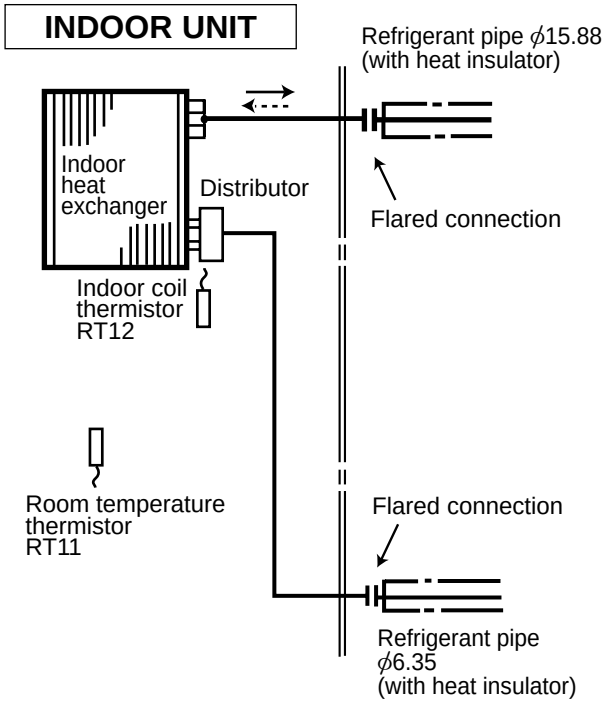
MCFH-A12WV- E1

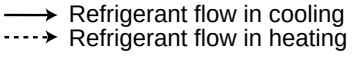


MCFH-A18WV- E1



MCFH-A24WV- E1





8 SERVICE FUNCTIONS

MCFH-A12WV -E1 MCFH-A18WV -E1 MCFH-A24WV -E1

8-1. TIMER SHORT MODE

For service, set time can be shortened by short circuit of JPG and JPS on the electronic control P.C. board.
The time will be shortened as follows. (Refer to page 18.)
3-minutes time delay : 3-minutes → 3-seconds
Set time : 1 minute ➔ 1-second
Set time : 3 minute ➔ 3-second (It takes 3 minutes for the compressor to start operation. However, the starting time is shortened by short circuit of JPG and JPS.)

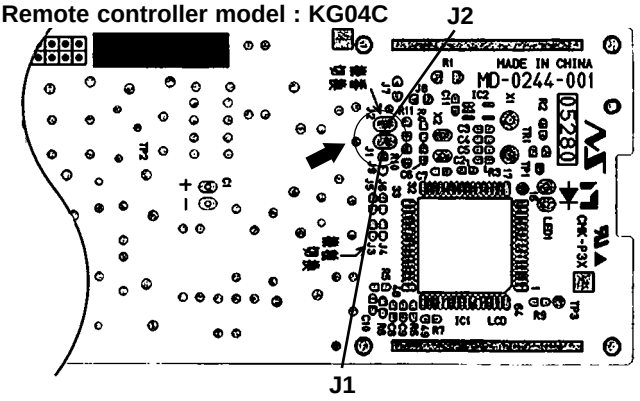
8-2. P.C. BOARD MODIFICATION FOR INDIVIDUAL OPERATION

A maximum of 4 indoor units with wireless remote controllers can be used in a room. In this case, to operate each indoor unit individually by each remote controller, P.C. boards of remote controller must be modified according to the number of the indoor unit.

How to modify the remote controller P.C. board

Remove batteries before modification. The board has a print as shown below;

Remote controller model : KG04C



NOTE : For remodelling, take out the batteries and press the OPERATE/STOP(ON/OFF) button twice or 3 times at first.
After finish remodelling, put back the batteries then press the RESET button.

The P.C. board has the print “J1” and “J2”. Solder “J1” and “J2” according to the number of indoor unit as shown in Table 1. After modification, press the RESET button.

Table1.

	1 unit operation	2 units operation	3 units operation	4 units operation
No. 1 unit	No modification	Same as at left	Same as at left	Same as at left
No. 2 unit	–	Solder J1	Same as at left	Same as at left
No. 3 unit	–	–	Solder J2	Same as at left
No. 4 unit	–	–	–	Solder both J1 and J2

How to set the remote controller exclusively for particular indoor unit

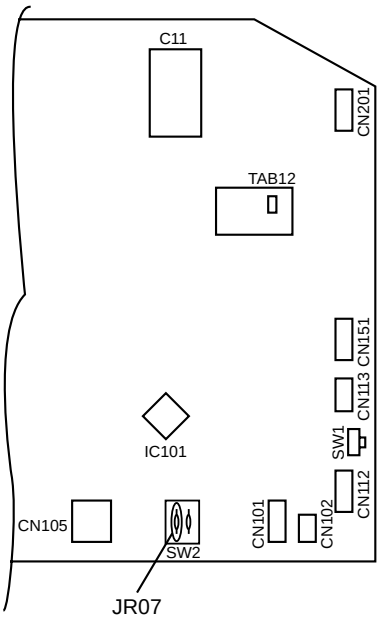
After you turn the breaker ON, the first remote controller that sends the signal to the indoor unit will be regarded as the remote controller for the indoor unit.
The indoor unit will only accepts the signal from the remote controller that has been assigned to the indoor unit once they are set.
The setting will be cancelled if the breaker has turned off, or the power supply has shut down.
Please conduct the above setting once again after the power has restored.

8-3. AUTO RESTART FUNCTION

When the indoor unit is controlled with the remote controller, the operation mode, set temperature, and the fan speed are memorized by the indoor electronic control P.C. board. The “AUTO RESTART FUNCTION” sets to work the moment power has restored after power failure.Then, the unit will restart automatically. However if the unit is operated in “I FEEL CONTROL” mode before power failure, the operation is not memorized. In “I FEEL CONTROL” mode, the operation is decided by the initial room temperature.

How to release “AUTO RESTART FUNCTION”

①Turn off the main power for the unit.
②Pull out the electronic control P.C. board. (Refer to page 19.)
③Solder jumper wire to the JR07 on the indoor electronic control P.C. board. (Refer to page 18.)



Operation

①If the main power (230V AC) has been cut, the operation settings remain.
②After the power is restored, the unit restarts automatically according to the memory.(However, it takes at least 3 minutes for the compressor to start running.)

NOTE

- The operation settings are memorized when 10 seconds have passed after the remote controller was operated with the remote controller.
- If main power is turned off or a power failure occurs while AUTO START/STOP timer is active ,the timer setting is cancelled.
- If the unit has been off with the remote controller before power failure, the auto restart function does not work as the power button of the remote controller is off.
- To prevent breaker off due to the rush of starting current, systematize other home appliances not to turn on at the same time.
- When some air conditioners are connected to the same supply system, if they are operated before power failure, the starting current of all the compressors may flow simultaneously at restart.
  Therefore, the special counter-measures are required to prevent the main voltage-drop or the rush of the starting current by adding to the system that allows the units to start one by one.

9 TROUBLESHOOTING

MCFH-A12WV -E1 MCFH-A18WV -E1 MCFH-A24WV -E1

9-1. Cautions on troubleshooting

1. Before troubleshooting, check the following:

(1) Check the power supply voltage.

(2) Check the indoor/outdoor connecting wire for mis-wiring.

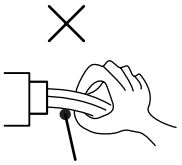
2. Take care the following during service.

(1) Before servicing the air conditioner, be sure to first turn off the remote controller to stop the main unit, and then after confirming the horizontal vane has completely closed, turn off the breaker.

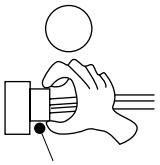
(2) Be sure to unplug the power cord before removing the air inlet grille, the front panel, the cabinet, the top panel and the electronic control P.C. boards.

(3) When removing the electronic control P.C. board, hold the edge of the board with care NOT to apply stress on the components.

(4) When connecting or disconnecting the connectors, hold the housing of the connector. DO NOT pull the lead wires.



Lead wiring



Housing point

3. Troubleshooting procedure

(1) First, check if the OPERATION INDICATOR lamp on the indoor unit is flashing on and off to indicate an abnormality. To make sure, check how many times the abnormality indication is flashing on and off before starting service work.

(2) If the electronic control P.C. board is supposed to be defective, check the copper foil pattern for disconnection and the components for bursting and discoloration.

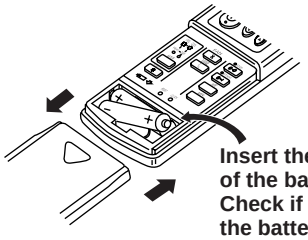
(3) When troubleshooting, refer to the flow chart and the check table on page 12 and 13.

4. How to replace batteries

Weak batteries may cause the remote controller malfunction.

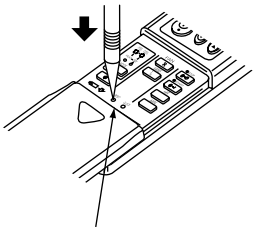
In this case, replace the batteries to operate the remote controller normally.

① Remove the front lid and insert batteries. Then reattach the front lid.



Insert the negative pole of the batteries first. Check if the polarity of the batteries are correct.

② Press the RESET button with tip end of ball point pen or the like, and then use the remote controller.



RESET button

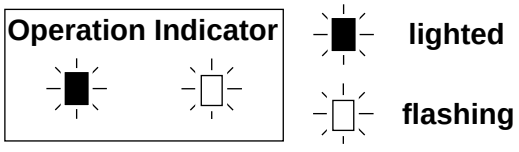
NOTE : If the RESET button is not pressed, the remote controller may not operate correctly.

INFORMATION FOR MULTI SYSTEM AIR CONDITIONER

OUTDOOR UNIT : MXZ-A18WV-E1 MXZ-A26WV-E1 MXZ-A32WV-E1

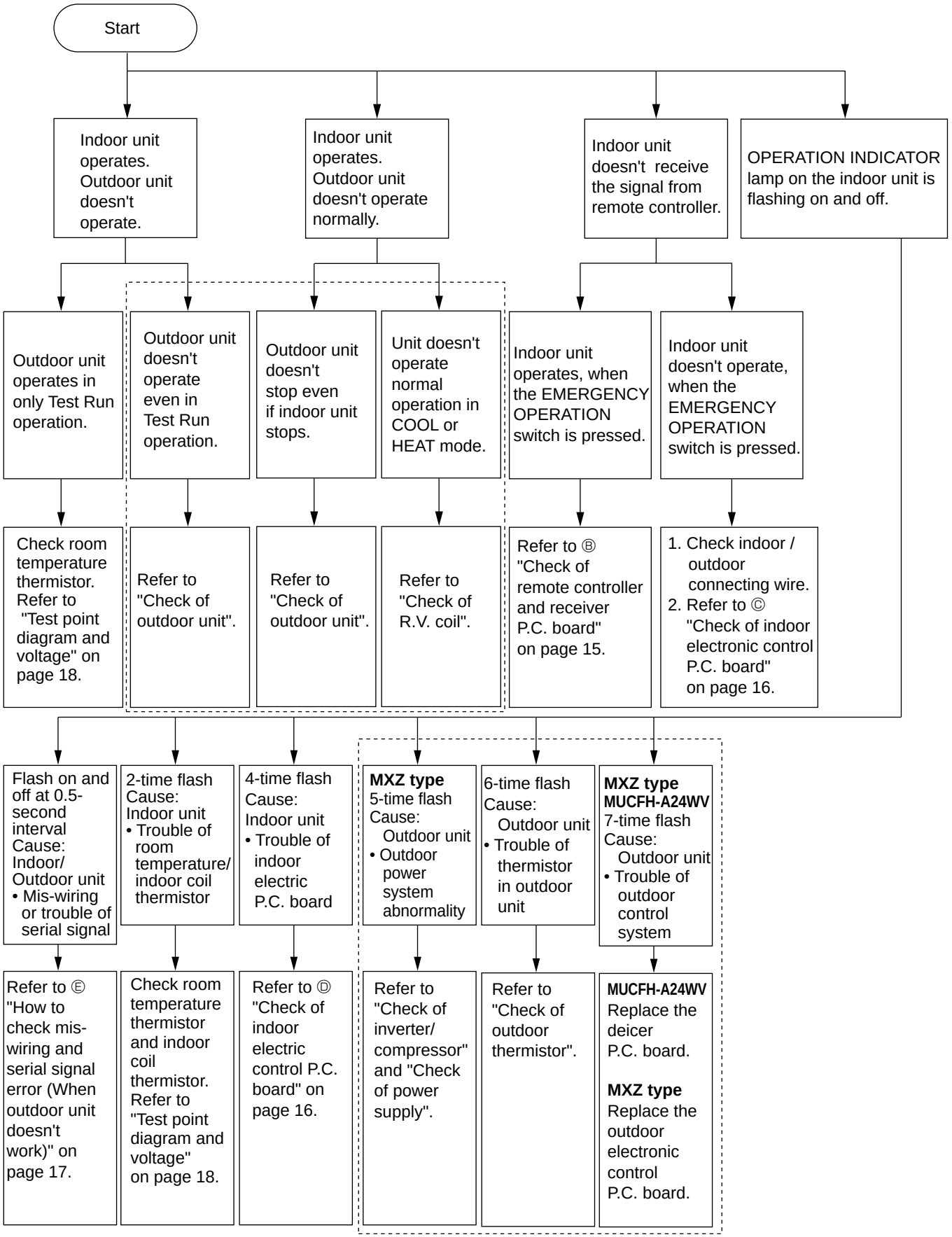
Multi system air conditioner can connect two or more indoor units with one outdoor unit.

- Unit won't operate in case the total capacity of indoor units exceeds the capacity of outdoor units. Do not connect indoor units beyond the outdoor unit capacity.
  Operation indicator lamp flashes as shown in the figure below.
- When you try to operate two or more indoor units with one outdoor unit simultaneously, one for the cooling and the other for heating, the operation mode of the indoor unit that operates earlier is selected. The other indoor units that will start the operation later cannot operate, indicating as shown in the figure below. In this case, please set all the indoor units to the same operation mode.



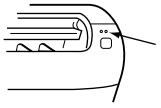
- When indoor units starts the operation while the defrosting of outdoor unit is being done, it takes a few minutes (max. 10 minutes) to blow out the warm air.
- In the heating operation, though indoor unit that does not operate may get warm or the sound of refrigerant flowing may be heard, they are not malfunction. The reason is that the refrigerant continuously flows into it.

9-2. Instruction of troubleshooting


Start
Indoor unit operates. Outdoor unit doesn't operate.
Indoor unit operates. Outdoor unit doesn't operate normally.
Indoor unit doesn't receive the signal from remote controller.
OPERATION INDICATOR lamp on the indoor unit is flashing on and off.
Outdoor unit operates in only Test Run operation.
Outdoor unit doesn't operate even in Test Run operation.
Outdoor unit doesn't stop even if indoor unit stops.
Unit doesn't operate normal operation in COOL or HEAT mode.
Indoor unit operates, when the EMERGENCY OPERATION switch is pressed.
Indoor unit doesn't operate, when the EMERGENCY OPERATION switch is pressed.
Check room temperature thermistor. Refer to "Test point diagram and voltage" on page 18.
Refer to "Check of outdoor unit".
Refer to "Check of outdoor unit".
Refer to "Check of R.V. coil".
Refer to Ⓑ "Check of remote controller and receiver P.C. board" on page 15.
1. Check indoor / outdoor connecting wire.
2. Refer to Ⓒ "Check of indoor electronic control P.C. board" on page 16.
Flash on and off at 0.5-second interval Cause: Indoor/ Outdoor unit
• Mis-wiring or trouble of serial signal
2-time flash Cause: Indoor unit
• Trouble of room temperature/ indoor coil thermistor
4-time flash Cause: Indoor unit
• Trouble of indoor electric P.C. board
MXZ type
5-time flash Cause: Outdoor unit
• Outdoor power system abnormality
6-time flash Cause: Outdoor unit
• Trouble of thermistor in outdoor unit
MXZ type
MUCFH-A24WV
7-time flash Cause: Outdoor unit
• Trouble of outdoor control system
Refer to Ⓔ "How to check mis-wiring and serial signal error (When outdoor unit doesn't work)" on page 17.
Check room temperature thermistor and indoor coil thermistor. Refer to "Test point diagram and voltage" on page 18.
Refer to Ⓓ "Check of indoor electric control P.C. board" on page 16.
Refer to "Check of inverter/ compressor" and "Check of power supply".
Refer to "Check of outdoor thermistor".
MUCFH-A24WV
Replace the deicer P.C. board.
MXZ type
Replace the outdoor electronic control P.C. board.

As for outdoor unit MUCFH type, refer to the service manual OB337.
As for outdoor unit MUH type, refer to the service manual OB331.
As for outdoor unit MXZ type, refer to the service manual OB319.

1. Troubleshooting check table



Before taking measures, make sure that the symptom reappears, for accurate troubleshooting.
Self check table

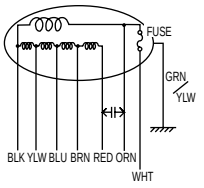
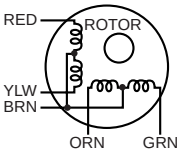
NO.	Abnormal point	Indication	Symptom	Detect method	Check point
1	Mis-wiring or Serial signal	0.5-second ON 0.5-second OFF	Outdoor unit does not run.	When serial signal stops for 4 to 5 seconds.	● Check wiring (visual check and conductivity check). ● Check indoor electronic control P.C.board. ● Check deicer P.C. board. ● Check electrical parts.
2	Indoor coil thermistor Room temperature thermistor	2-time flash 2.5-second OFF	Outdoor unit does not run.	Detect Indoor coil/room temperature thermistor short or open circuit every 8 seconds during operation.	● Check resistance of thermistor. ● Reconnect connector. ● Check indoor electronic control P.C.board.
3	Indoor control P.C. board	4-time flash 2.5-second OFF	Indoor unit does not run	When it cannot properly read data in the nonvolatile memory of the indoor control P.C.board.	● Check the indoor control P.C. board.
4	Outdoor thermistor	6-time flash 2.5-second OFF	Outdoor unit does not run	When the outdoor thermistors short or open after the compressor start-up.	● Check deicer P.C. board. ● Check resistance of thermistor. ● Reconnect connector. Refer to service manual OB337, OB331 or OB319.
5	**MCFH-A24WV MXZ type** Outdoor control P.C. board	7-time flash 2.5-second OFF	Outdoor unit does not run	When it cannot properly read data in the nonvolatile memory of the outdoor control P.C.board.	● Check the outdoor control P.C.board. Refer to service manual OB337 or OB319.
✵ 6	**MXZ type** Outdoor power system	5-time flash 2.5-second OFF	Outdoor unit does not run	When the compressor operation is continuously three times interrupted by over current protection within 1 minute after start-up , it stops operation.	● Check the inverter output. ● Check the compressor. Refer to service manual OB319.
✵ 7	**MXZ type** Operation mode setting	Operation Indicator : Lighted : Flashing 2.5-second OFF	Outdoor unit operates but indoor unit does not operate.	When the operation mode of each indoor unit is differently set to COOL(includes DRY) and HEAT at same time, the operation mode of indoor unit that has operated at first has the priority.	● Unify the operation mode. Refer to service manual OB319.

✵The indication is shown only when the indoor unit connects with the outdoor unit MXZ type.

2. Trouble criterion of main parts

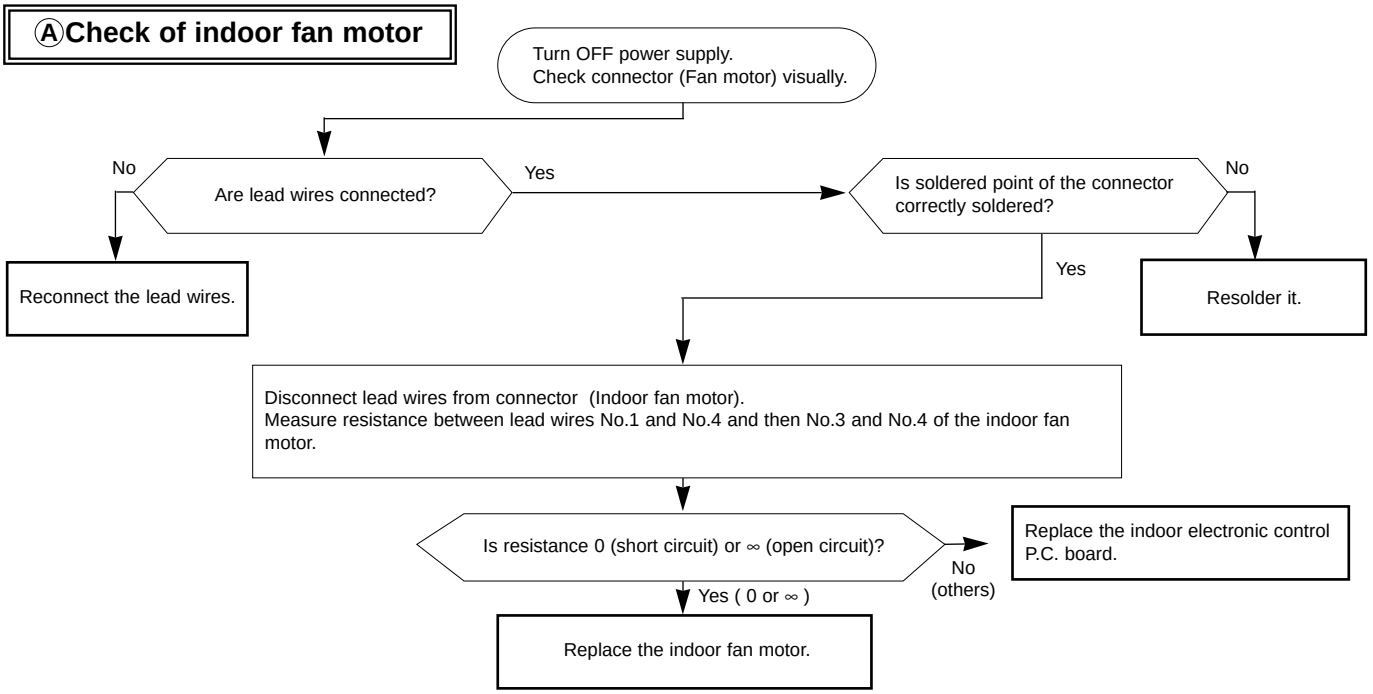
MCFH-A12WV -E1 MCFH-A18WV -E1 MCFH-A24WV -E1

<table>
<tr><th>Part name</th><th>Check method and criterion</th><th>Figure</th></tr>
<tr><td>Room temperature thermistor (RT11)
Indoor coil thermistor (RT12)</td><td>Measure the resistance with a tester.
(Part temperature 10°C ~ 30°C)<table><tr><th>Normal</th><th>Abnormal</th></tr><tr><td>8kΩ ~ 20kΩ</td><td>Open or short-circuit</td></tr></table></td><td></td></tr>
<tr><td>Indoor fan motor (MF)

INNER FUSE
145 ± 5℃ CUT OFF</td><td>Measure the resistance between the terminals with a tester.
(Part temperature10°C ~ 30°C)<table><tr><th rowspan="2">Color of lead wire</th><th colspan="3">Normal</th><th rowspan="2">Abnormal</th></tr><tr><th>MCFH-A12WV</th><th>MCFH-A18WV</th><th>MCFH-A24WV</th></tr><tr><td>WHT-BLK</td><td>175~190Ω</td><td>79~87Ω</td><td>80~88Ω</td><td rowspan="5">Open or short-circuit</td></tr><tr><td>BLK-YLW</td><td>66~72Ω</td><td>63~69Ω</td><td>44~49Ω</td></tr><tr><td>YLW-BLU</td><td>45~50Ω</td><td>34~38Ω</td><td>35~39Ω</td></tr><tr><td>BLU-BRN</td><td>30~33Ω</td><td>25~29Ω</td><td>43~47Ω</td></tr><tr><td>BRN-RED</td><td>22~24Ω</td><td>13~15Ω</td><td>13~15Ω</td></tr></table></td><td> 
</td></tr>
<tr><td>Vane motor (MV)</td><td>Measure the resistance between the terminals with a tester.
(Part temperature10°C ~ 30°C)<table><tr><th>Normal</th><th>Abnormal</th></tr><tr><td>328~356Ω</td><td>Open or short-circuit</td></tr></table></td><td> 
</td></tr>
</table>

Indoor fan does not operate.

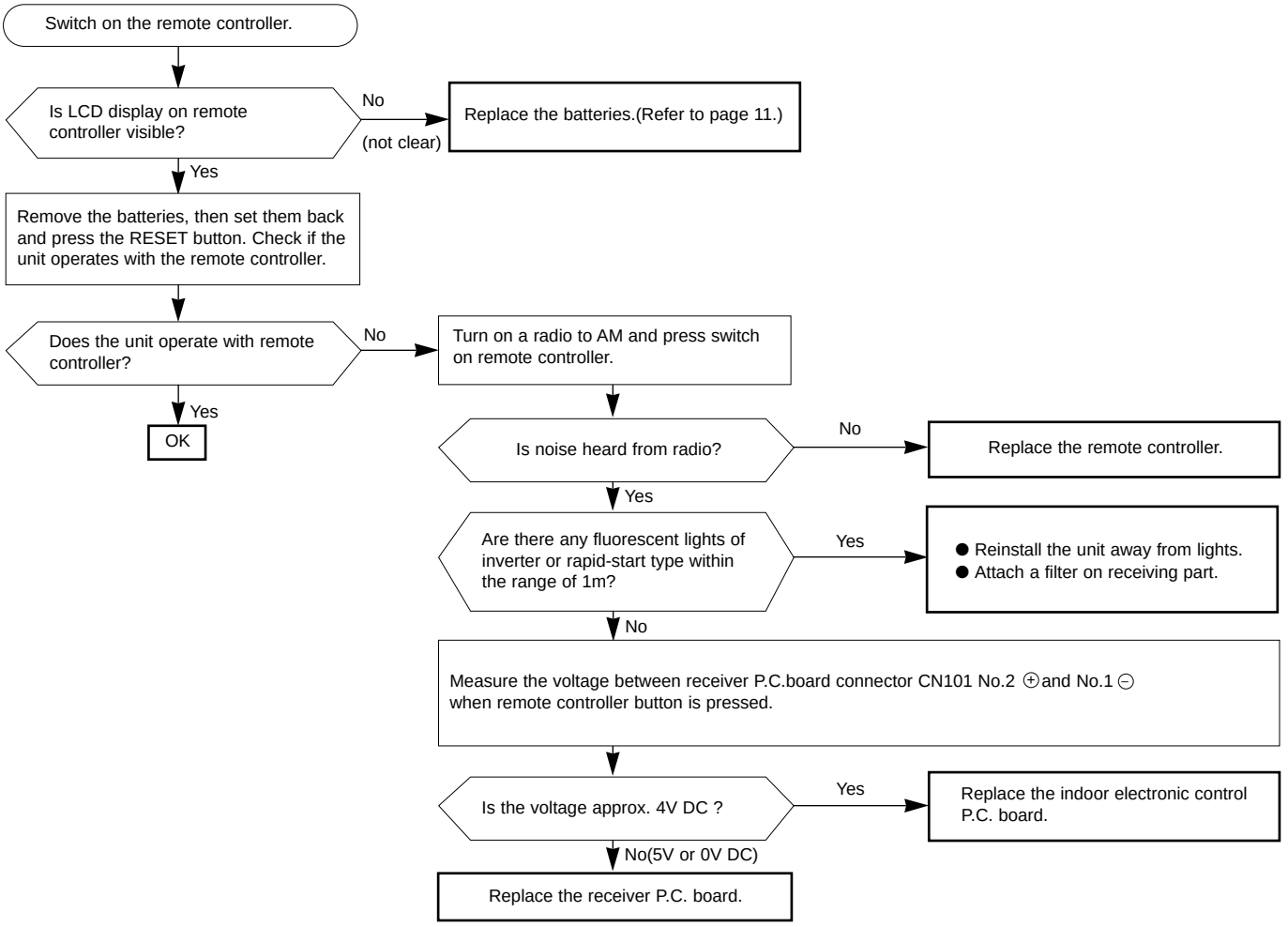
Ⓐ Check of indoor fan motor


Turn OFF power supply.
Check connector (Fan motor) visually.
No
Are lead wires connected?
Yes
Is soldered point of the connector correctly soldered?
No
Yes
Reconnect the lead wires.
Resolder it.
Disconnect lead wires from connector (Indoor fan motor).
Measure resistance between lead wires No.1 and No.4 and then No.3 and No.4 of the indoor fan motor.
Is resistance 0 (short circuit) or ∞ (open circuit)?
No (others)
Replace the indoor electronic control P.C. board.
Yes (0 or ∞)
Replace the indoor fan motor.

Indoor unit operates by pressing the EMERGENCY OPERATION switch, but does not operate with the remote controller.

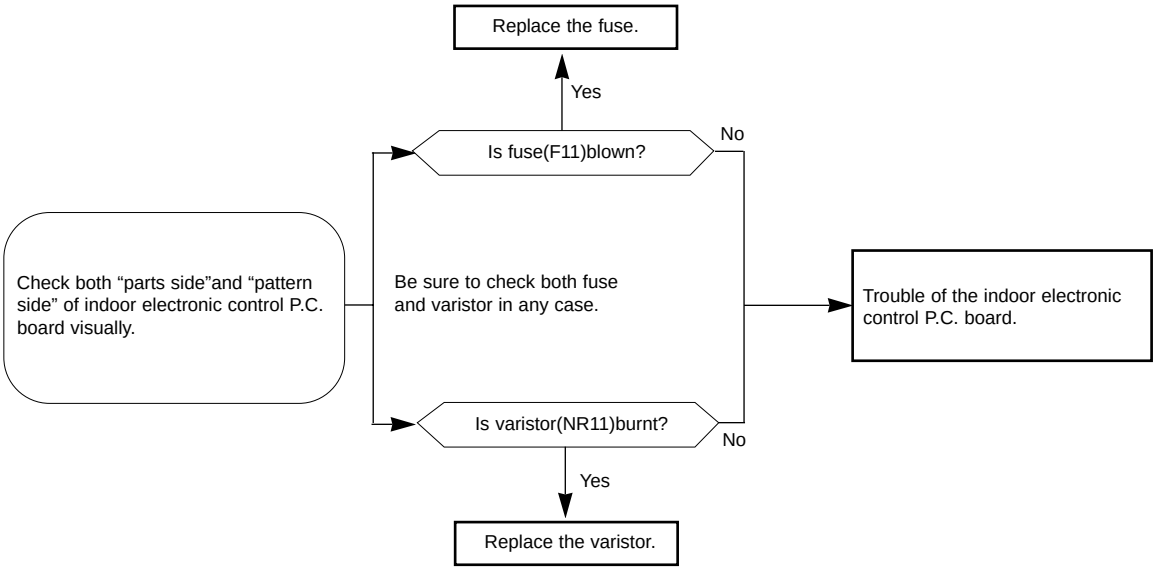
Ⓑ Check of remote controller and receiver P.C. board

※ Check if the remote controller is exclusive for this air conditioner.


Switch on the remote controller.
Is LCD display on remote controller visible?
No (not clear)
Replace the batteries.(Refer to page 11.)
Yes
Remove the batteries, then set them back and press the RESET button. Check if the unit operates with the remote controller.
Does the unit operate with remote controller?
No
Turn on a radio to AM and press switch on remote controller.
Yes
OK
Is noise heard from radio?
No
Replace the remote controller.
Yes
Are there any fluorescent lights of inverter or rapid-start type within the range of 1m?
Yes
● Reinstall the unit away from lights.
● Attach a filter on receiving part.
No
Measure the voltage between receiver P.C.board connector CN101 No.2 ⊕ and No.1 ⊖ when remote controller button is pressed.
Is the voltage approx. 4V DC ?
Yes
Replace the indoor electronic control P.C. board.
No(5V or 0V DC)
Replace the receiver P.C. board.

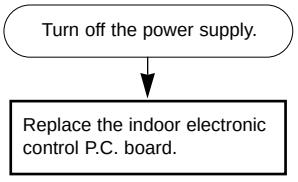
The unit does not operate with the remote controller.
Also, the OPERATION INDICATOR lamp doesn't light up by pressing the EMERGENCY OPERATION switch.

ⓒCheck of indoor electronic control P.C. board


Replace the fuse.
Yes
Is fuse(F11)blown?
No
Check both "parts side"and "pattern side" of indoor electronic control P.C. board visually.
Be sure to check both fuse and varistor in any case.
Trouble of the indoor electronic control P.C. board.
Is varistor(NR11)burnt?
No
Yes
Replace the varistor.

When OPERATION INDICATOR lamp flashes 4 - time.
Indoor unit does not operate.

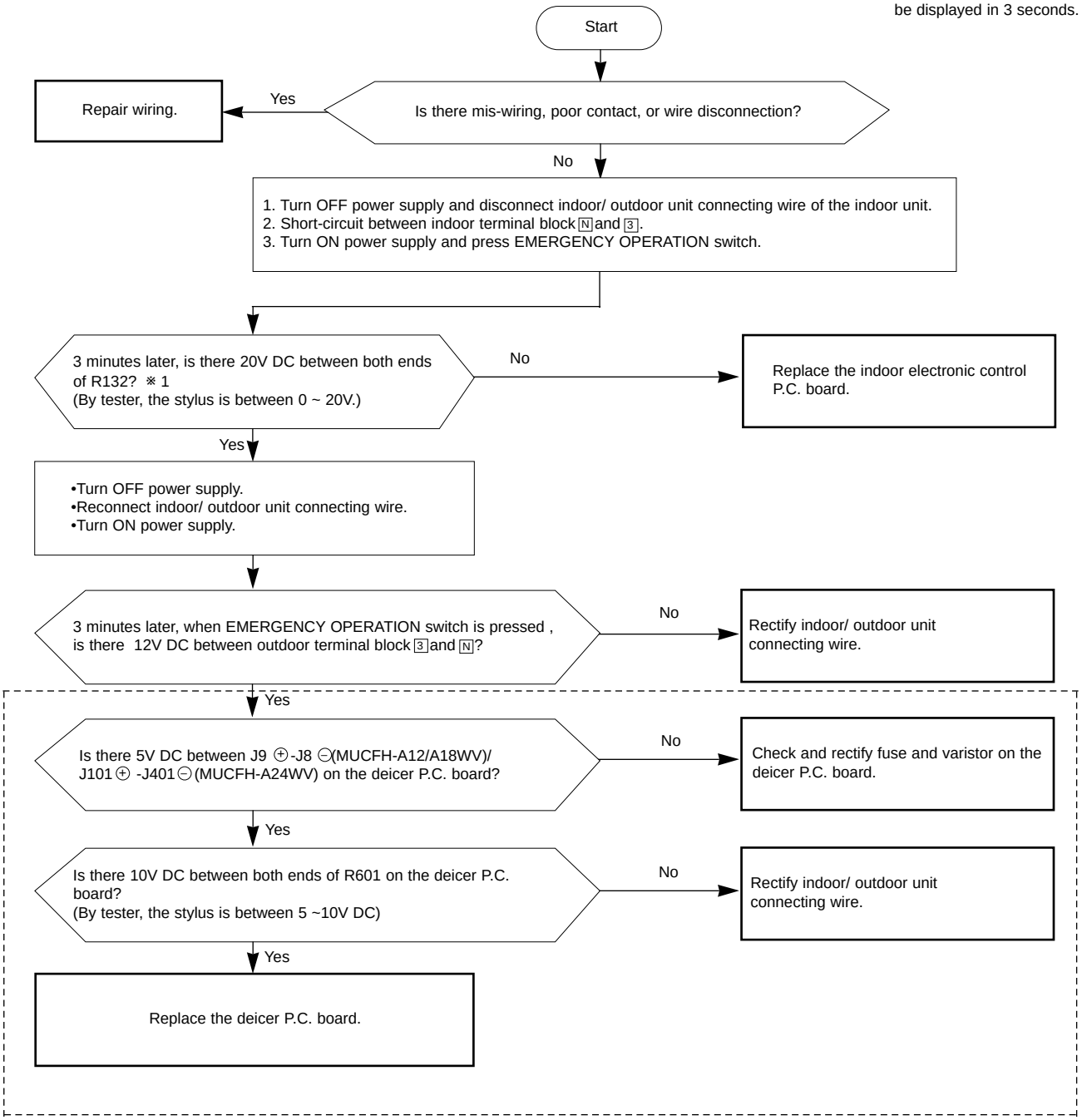
ⓓCheck of indoor electronic control P.C. board



When OPERATION INDICATOR lamp flashes ON and OFF in every 0.5-second.
Outdoor unit does not operate.

Ⓔ How to check mis-wiring and serial signal error (when outdoor unit does not work)

※ 1 Short circuit of JPG and JPS on the electronic control P.C. board enables self-check to be displayed in 3 seconds.


Start
Is there mis-wiring, poor contact, or wire disconnection?
Yes
Repair wiring.
No
1. Turn OFF power supply and disconnect indoor/ outdoor unit connecting wire of the indoor unit.
2. Short-circuit between indoor terminal block N and 3.
3. Turn ON power supply and press EMERGENCY OPERATION switch.
3 minutes later, is there 20V DC between both ends of R132? ※ 1
(By tester, the stylus is between 0 ~ 20V.)
No
Replace the indoor electronic control P.C. board.
Yes
•Turn OFF power supply.
•Reconnect indoor/ outdoor unit connecting wire.
•Turn ON power supply.
3 minutes later, when EMERGENCY OPERATION switch is pressed , is there 12V DC between outdoor terminal block 3 and N?
No
Rectify indoor/ outdoor unit connecting wire.
Yes
Is there 5V DC between J9 ⊕ -J8 ⊖ (MUCFH-A12/A18WV)/ J101 ⊕ -J401 ⊖ (MUCFH-A24WV) on the deicer P.C. board?
No
Check and rectify fuse and varistor on the deicer P.C. board.
Yes
Is there 10V DC between both ends of R601 on the deicer P.C. board?
(By tester, the stylus is between 5 ~10V DC)
No
Rectify indoor/ outdoor unit connecting wire.
Yes
Replace the deicer P.C. board.

As for outdoor unit MUCFH type, refer to the service manual OB337.
As for outdoor unit MUH type, refer to the service manual OB331.
As for outdoor unit MXZ type, refer to the service manual OB319.

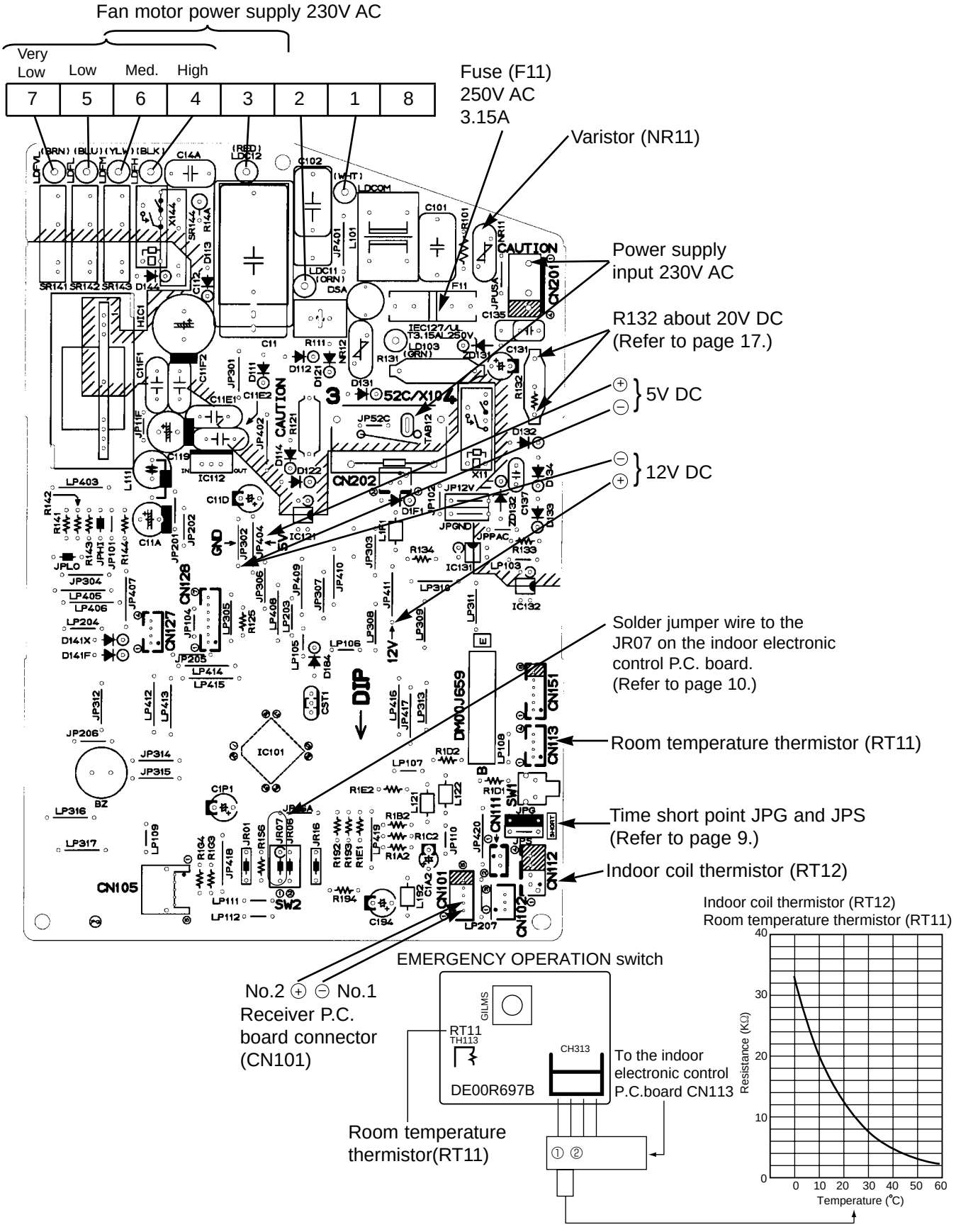
TEST POINT DIAGRAM AND VOLTAGE

MCFH-A12WV - E1

MCFH-A18WV - E1

MCFH-A24WV - E1

Indoor electronic control P.C. board

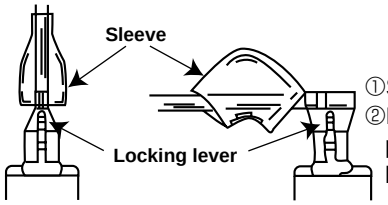


10 DISASSEMBLY INSTRUCTIONS

<"Terminal with lock mechanism" Detaching points>

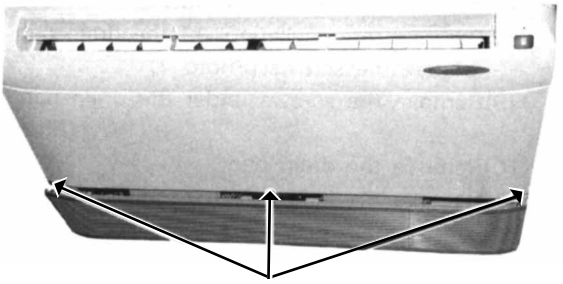
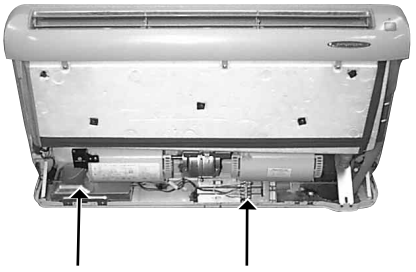
In case of terminal with lock mechanism, detach the terminal as shown below.
There are two types (Refer to (1) and (2)) of the terminal with lock mechanism.
The terminal with no lock mechanism can be removed by pulling it out.
Check the shape of the terminal and work.

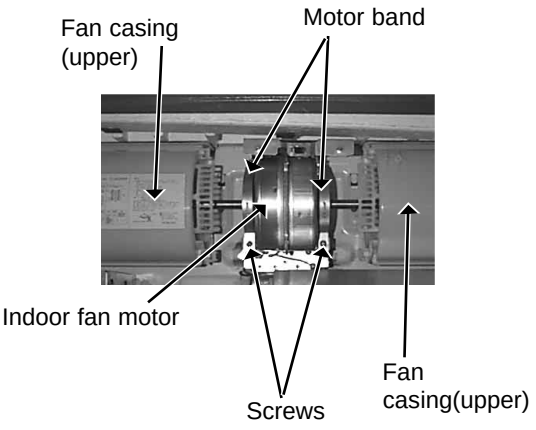
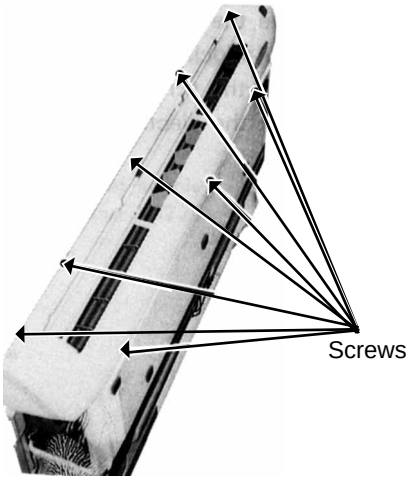
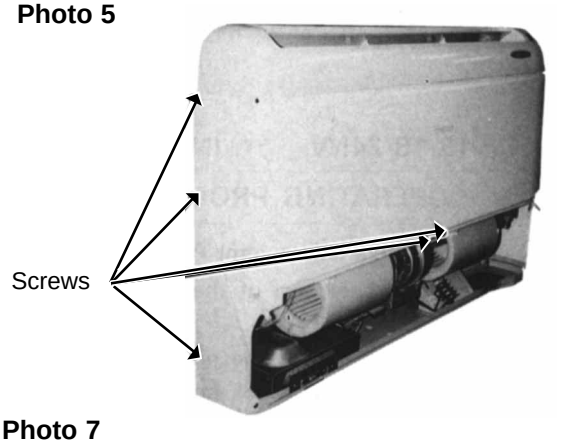
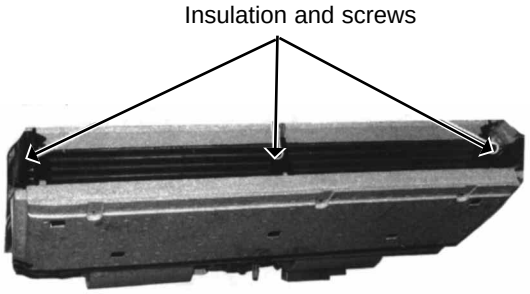
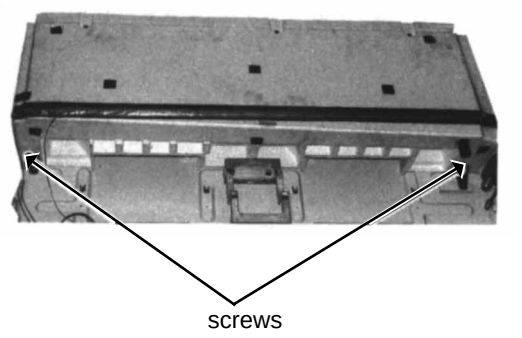
Slide the sleeve and check if there is a locking lever or not.



①Slide the sleeve.
②Pull the terminal while pushing the locking lever.

10-1. MCFH-A12WV-E1 MCFH-A18WV-E1 MCFH-A24WV-E1 INDOOR UNIT

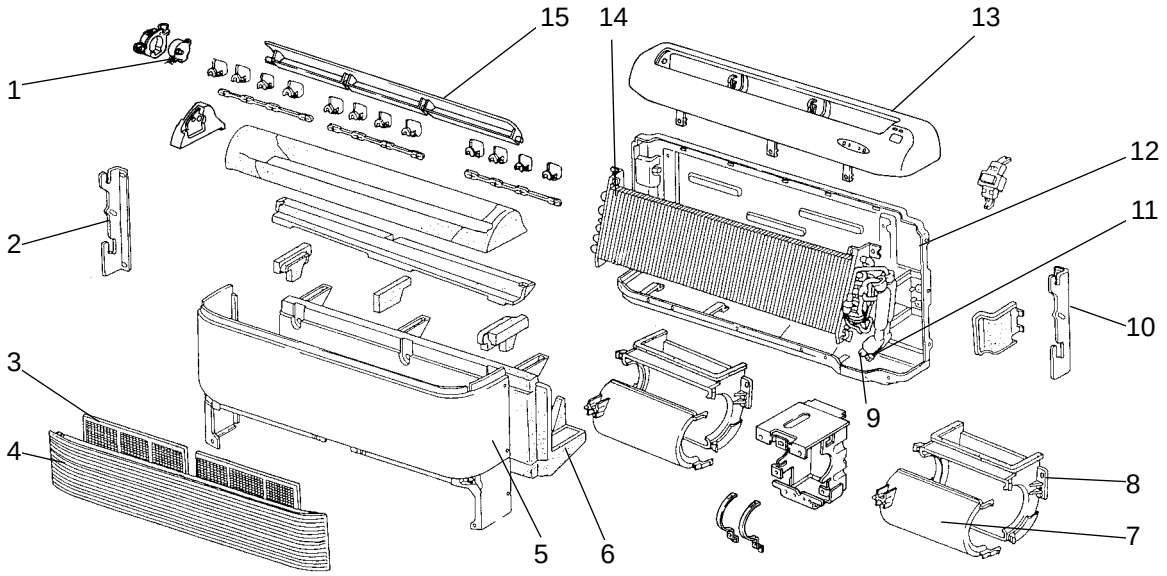
OPERATING PROCEDURE	PHOTOS
1. Removing the electronic control P. C . board. (1) Pull out the upper part of the grille. (Photo 1) (2) Remove the screws of the grille. (3) Remove screws of terminal block cover. Remove the terminal block cover and remove the terminal block. (4) Remove the screws of the electronic box cover. (5) Pull out the electronic control P. C. board. **Photo 3** Electronic control P.C. board	**Photo 1**  Screws **Photo 2**  Electronic box Terminal block

OPERATING PROCEDURE	PHOTOS
2. Removing the indoor fan motor (1) Remove the grille. (Refer to 1(1) (2).) (2) Remove the fan casing.(upper) (3) Disconnect the connector of the indoor fan motor. (4) Disconnect the ground wire of the fan motor. (5) Remove the screws of the motor band and remove the catch. (6) Take out the sirocco fan and the indoor fan motor.	**Photo 4** 
3. Removing the indoor heat exchanger. (1) Remove the grille. (Refer to 1(1) (2).) (2) Remove the screws on both side and in front of the front panel. (Photo 5) (3) Remove the screws of the nozzle assembly. (Photo 6) (4) Remove the electronic box. (Refer to 1.) (5) Remove the indoor fan motor. (Refer to 2.) (6) Remove the screws of the motor support . (7) Remove the fan casing. (lower) (8) Remove the insulation of the drain pan and remove the screws. (Photo 7) (9) Remove the screws under the drain pan. (Photo 8) (10) Remove the drain pan. (11) Remove the indoor heat exchanger. **Photo 6**  	**Photo 5**  **Photo 7**  **Photo 8** 

11 PARTS LIST

MCFH-A12WV - E1 (WH)
MCFH-A18WV - E1 (WH)
MCFH-A24WV - E1 (WH)

11-1. INDOOR UNIT STRUCTURAL PARTS

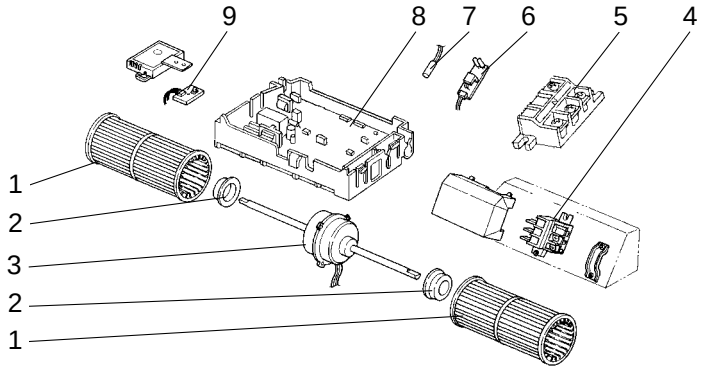


Part number that is circled is not shown in the illustration.

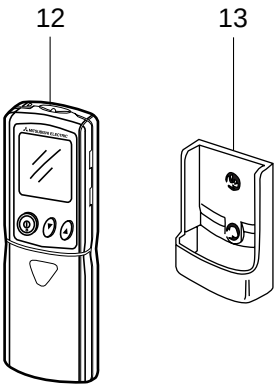
No.	Part No.	Part name	Symbol in Wiring Diagram	Q'ty/unit			Remarks
				MCFH-A12WV - E1 (WH)	MCFH-A18WV - E1 (WH)	MCFH-A24WV - E1 (WH)	
1	E02 227 303	VANE MOTOR	MV	1	1	1	
2	E02 179 971	INSTALLATION METAL (L)		1	1	1	
3	E02 179 100	AIR FILTER		2	2	2	
4	E02 179 010	GRILLE (WH)		1	1	1	
5	E02 179 000	FRONT PANEL (WH)		1	1	1	
6	E02 215 700	DRAIN PAN		1	1	1	
7	E02 179 237	FAN CASING (U)		2	2	2	
8	E02 179 238	FAN CASING (L)		2	2	2	
9	E02 179 667	UNION (GAS)		1	1		ϕ12.7
	E02 138 666	UNION (GAS)				1	ϕ15.88
10	E02 179 972	INSTALLATION METAL (R)		1	1	1	
11	E02 138 667	UNION (LIQUID)		1	1	1	ϕ6.35
12	E02 179 231	BACK PANEL (IN)		1	1	1	
13	E02 227 235	NOZZLE (WH)		1	1	1	
14	E02 823 620	INDOOR HEAT EXCHANGER		1			
	E02 824 620	INDOOR HEAT EXCHANGER			1	1	
15	E02 227 040	VANE (WH)		1	1	1	
⑯	E02 179 142	GRILLE CATCH (WH)		3	3	3	3PCS/SET

MCFH-A12WV -E1(WH)
MCFH-A18WV -E1(WH)
MCFH-A24WV -E1(WH)

11-2. INDOOR UNIT ELECTRICAL PARTS



11-3. ACCESSORY AND REMOTE CONTROLLER



11-2. INDOOR UNIT ELECTRICAL PARTS

Part numbers that are circled are not shown in the illustration.

No.	Part No.	Part name	Symbol in Wiring Diagram	Q'ty/unit			Remarks
				MCFH-A12WV -E1 (WH)	MCFH-A18WV -E1 (WH)	MCFH-A24WV -E1 (WH)	
1	E02 179 500	SIROCCO FAN		2	2	2	
2	E02 179 505	FAN MOTOR RUBBER MOUNT		2	2	2	2PCS/SET
3	E02 228 300	INDOOR FAN MOTOR	MF	1			RB4V25-□□
	E02 229 300	INDOOR FAN MOTOR	MF		1		RB4V36-□□
	E02 684 300	NDOOR FAN MOTOR	MF			1	RB4V36-□□
4	E02 826 375	TERMINAL BLOCK	TB2	1	1	1	3P
5	E02 823 375	TERMINAL BLOCK	TB1	1	1	1	3P
6	E02 227 468	RECEIVER P.C. BOARD	DISP/RECEIVER P.C. BOARD	1	1	1	
7	E02 327 307	INDOOR COIL THERMISTOR	RT12	1	1	1	
8	E02 826 452	ELECTRONIC CONTROL P.C. BOARD		1			
	E02 827 452	ELECTRONIC CONTROL P.C. BOARD			1		
	E02 828 452	ELECTRONIC CONTROL P.C. BOARD				1	
9	E02 215 328	SWITCH & ROOM TEMPERATURE THERMISTOR P.C. BOARD	SW/THERMO P.C. BOARD	1	1	1	
⑩	E02 820 385	VARISTOR	NR11	1	1	1	
⑪	E02 127 382	FUSE	F11	1	1	1	3.15A

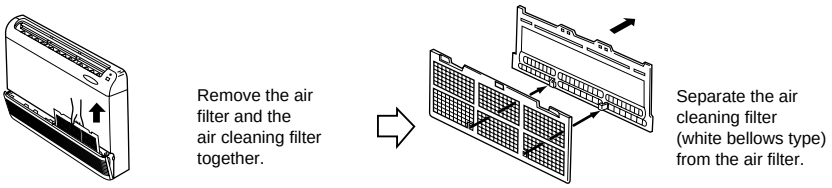
11-3. ACCESSORY AND REMOTE CONTROLLER

12	E02 826 426	REMOTE CONTROLLER		1	1	1	
13	E02 527 083	REMOTE CONTROLLER HOLDER		1	1	1	

12 OPTIONAL PARTS

12-1. AIR CLEANING FILTER

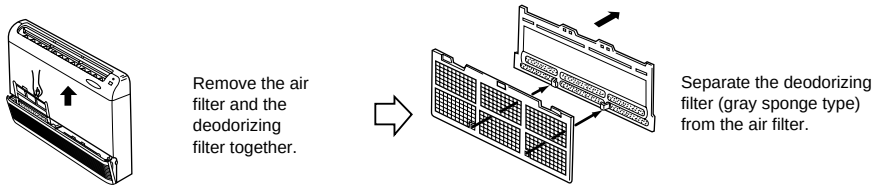
- If the air cleaning filter is clogged, it may lower the unit's capacity or cause condensation at the air outlet .
- The air cleaning filter is disposable . The standard usable term is about 4 months . However , if the color of the filter turns to dark brown , replace soon .


Remove the air filter and the air cleaning filter together.
Separate the air cleaning filter (white bellows type) from the air filter.

Models	Part No.
MCFH-A12WV - E1 **MCFH-A18WV -** E1 **MCFH-A24WV -** E1	MAC - 1200 FT

12-2. DEODORIZING FILTER

- Clean the filter every two weeks . When it becomes too dirt , clean it more often .
- Replace the filter with a new one when its color can not be restored even after washing or when the filter becomes dark.
- Standard interval for the filter replacement is about 1 year .


Remove the air filter and the deodorizing filter together.
Separate the deodorizing filter (gray sponge type) from the air filter.

Models	Part No.
MCFH-A12WV - E1 **MCFH-A18WV -** E1 **MCFH-A24WV -** E1	MAC - 1700 DF

MITSUBISHI ELECTRIC CORPORATION

HEAD OFFICE: MITSUBISHI DENKI BLDG.,2-2-3, MARUNOUCHI, CHIYODA-KU, TOKYO100-8310, JAPAN

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